

Keynote Remarks

by

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at the

Perspectives for the Global Energy Transition:

Investment Needs for Achieving the Well Below 2 Degrees

Target

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Your Excellency, Rainer Baake, State Secretary of the Federal Ministry for Economic Affairs and Energy, Germany

Excellencies, Distinguished Guests, Ladies and Gentlemen,

Good morning. I wish to extend a warm welcome to everyone joining us for this Renewable Energy Day. I am confident we have very interesting, intensive and enlightening day in the hours ahead. We have some exceptional speakers bringing very special insights on where we are in the ongoing energy transformation, and suffice it to say, it is moving much faster than anybody anticipated, and it will be much more fundamental for our economies and societies than anyone is yet aware of. I think that for many of us in this room, we are already seeing this. Let me start by thanking our co-organisers, the Governments of Fiji, Germany and the UAE, and especially our hosts, the Deutsche Post DHL Group, a company that is setting the bar high in its industry by aiming to reduce all logistics-related emissions to zero by 2050. That is extraordinary for a global company of this scale. Let me also say that it is a special pleasure to be here in Germany, the front runner country in energy transition and home of the energiewende, which has inspired

many of IRENA's 180 countries to move forward together in a global energiewende that is increasingly taking hold across the world. And it is an even greater pleasure to be in the city of Bonn, which is IRENA's second home, with our Innovation and Technology Centre Office, and the birthplace of our Agency in a way, where our founding conference took place in 2009.

Ladies and Gentlemen,

Only a few years ago, when IRENA was established, many people were not convinced or aware of the need for the energy transformation, or of the role renewables could play in this respect. But since then, drastic cost reductions, technological innovation and enabling policies have led to an unprecedented growth of renewables that has exceeded all expectations.

Last year, renewable power generation capacity increased by a record 161 GW, more than half of total power generation capacity additions. Investment in renewable energy exceeded USD 270 billion in

2016. Today, renewables are competitive with conventional energy sources in many parts of the world and often the technology of choice.

This surge of renewable energy has been driven by a business case which has never been stronger. Solar and wind projects are now offered for 3 US cents per kWh and even less in many parts of the world. And recently, in our host city of Abu Dhabi, the contract for a solar PV park of 1.17 GW was signed at a record low price of 2.42 US cents per kWh. Last April, Germany announced that it had accepted its first subsidy-free offshore wind auction bid with record-low weighted average of USD 4.67 per megawatt-hour, less than a tenth of the previous offshore wind deal. And we see also in the UK recently over the course of the last year, that offshore wind has come in at around half of the price of nuclear power generation, which has caused a rethinking of the energy policy in the country today. A new record for CSP was set in Dubai last September where 700 MW were awarded at 7.30 US cents per kWh with storage. This is the first time that we have 24 hour concentrated solar power with storage at that price.

These downward cost trends are remarkable and expected to continue. Our analysis finds that costs for solar PV could drop by a further 60%, offshore wind by 35%, and concentrated solar power by

almost 45% over the next decade. And we are expecting similar trends in battery storage costs. Our latest report shows and analysis that by 2030 total installed costs could fall between 50% and 60%, transforming the energy landscape both with stationary and mobile applications for batteries.

In addition to its strong business case, the global drive to address climate change is providing further impetus to the deployment of renewables. The urgency has never been greater. Last month, the World Meteorological Organisation (WMO) announced that the concentrations of carbon dioxide in the atmosphere surged at a record-breaking speed in 2016 to the highest level in 800 000 years. And rising levels of air pollution in large cities are taking a major toll on public health and economic activity. Recently, the Lancet Commission on Pollution and Health found that air pollution kills roughly 6.5 million people each year. The human and economic costs is almost unimaginable.

If we are serious about tackling climate change, we need to decarbonise the energy sector that accounts for 2/3 of global emissions. Earlier this year, in the context of the Germany Presidency of the G20, we launched a study on the decarbonisation of the energy sector in line with the ‘well below 2C’ target of the Paris Agreement. The report finds that

renewables and energy efficiency would meet the 90% of emission reduction needed and the share of renewables in the primary energy supply would rise to 65% by 2050, up from 15% today. We believe that this energy transition is not only technically feasible but also economically attractive as it will fuel economic growth and create new employment opportunities. Global GDP will be boosted by around 0.8% in 2050, the equivalent of almost USD 19 trillion in increased economic activity between today and 2050. Renewable energy jobs in our scenario would reach 26 million by 2050 from 9.8 million today. So we believe that ‘Renewables are both good for climate and good for growth’, which is the key message that we bring to the climate community today based on these findings.

Although, most countries now recognise the importance of renewables for decarbonisation efforts, and reference them in their National Determined Contributions, our just released NDCs report finds that around twice as much new renewable power capacity came online in 2015 and 2016 compared to the amount foreseen in the NDCs. The current review process of NDCs provides an important opportunity for countries to revise these plans and raise their level of ambition. In this context, IRENA will establish a new facility to provide strategic planning and technical support to all countries that are planning to raise their

ambition and it will work to support you to comprehensively understand renewable energy can play an important part in NDCs in the future.

The strong business case of renewables and the climate imperative are strengthening the momentum of the energy transformation across the globe. With today's event, we wanted to bring together the leading actors in this energy transformation to explore the innovations, ideas, technology and benefits of a global renewable energy-based transformation.

We will hear about the climate imperative for renewables in SIDS. And we are particularly appreciative that this COP, under the Presidency of Fiji, is putting a spotlight on the challenges facing SIDS where we are very active. We will also know more about the rapidly growing renewables markets in developing and emerging economies from Africa to Argentina. We will then shift to the massive renewables upscale taking place in China with energy leaders from the country's public and private sector sharing experiences about the extraordinary developments taking place there. Our Visionaries and Innovators segment will feature the cutting edge technology and actions that can take the energy transformation to the next level, such as Bertrand Piccard's Solar Impulse. Governor Jerry Brown will tell us about California's impressive record in

renewables deployment and its plans for reaching 100% renewables by 2045. The Lord-Mayor of Bonn, Ashok-Alexander Sridharan, will then highlight the ways that renewables are poised to transform COP23's host city. Corporate leaders from some of the world's most well-known energy and technology companies will then discuss why they are increasingly turning to renewables to power their operations and diversify their businesses. And our final segment of the day will look at the ways action by subnational actors, like mayors, are driving renewable energy in cities and communities around the world at a scale never before seen

Ladies and Gentleman,

The global surge of renewables is not just about the replacement of one energy source by another but about an energy transformation that is reshaping the way energy is produced, distributed and consumed with a more decentralised and democratic energy system emerging. The pace of change is accelerating, as we are seeing in areas such as digitisation, storage and sustainable transportation. This energy transformation is fostering new opportunities for boosting economic growth, creating jobs, enhancing energy access and energy security and achieving sustainable development. With this energy transformation, we can realise our climate

and energy objectives in tandem, while growing our economies and driving international cooperation. This is a remarkable opportunity that the international community has on its hands today, which is dramatically different from the past.

So, we must seize this extraordinary opportunity, and at IRENA, we are ready to work with all of you to make this sustainable energy future a reality. I believe that more and more people have come understand the imperative of change, the dynamic and logic of change that is taking place, and we are moving to a sustainable future. The question for us then is how to we accelerate this momentum to be in safe limits by the time we get there. Once more, welcome and thank you for joining us here today.